

**Cleanup Standards Scientific Advisory Board
Meeting Minutes
RCSOB Room 105
April 4, 2018**

CSSAB Members Present:

Ronald Buchanan, Chairman
Joel Bolstein
Chuck Campbell
James Connor
Colleen Costello
Annette Guiseppi-Elie

Michael Meloy
Craig Robertson
Mark Smith
Mark Urbassik
Don Wagner

Department of Environmental Protection (DEP) Staff Present:

Abbey Cadden
Troy Conrad
Carolyn Fair
George Hartenstein
Mike Maddigan

Frank Nemec
Brie Sterling
Ali Tarquino Morris
Sharon Trostle

Others Present:

John Clarke – Penn DOT
Jenny DeBoer – Stantec
Will Hitchcock – Manko, Gold, Katcher, & Fox

J. Neil Ketchum – Groundwater Sciences
Kay Linnell - Langan
Ted Mosher – React Environmental

Call to Order

Chairman Ronald Buchanan called the Cleanup Standards Scientific Advisory Board (CSSAB) meeting to order at 9:10 a.m.

Administrative Items

The draft meeting minutes of the September 7, 2017, CSSAB conference call were approved unanimously without comment or revision.

Troy Conrad announced that Mr. Buchanan is retiring after many years of service. Mr. Conrad read a letter of appreciation from PA DEP Secretary McDonnell aloud. Mr. Buchanan subsequently requested nominations from the Board to elect a new Chairman. Craig Robertson nominated Chuck Campbell, which was seconded by Mike Meloy. Mr. Campbell accepted the nomination, and it was unanimously approved by the Board pending approval from Mr.

Campbell's employer. Mr. Meloy will remain Vice-Chairman. Upon acceptance, Mr. Campbell chaired the remainder of the meeting.

Mr. Conrad reminded the Board that recent revisions to the bylaws allow members with expired terms to remain active on the Board until reappointment. Michael Maddigan reviewed the list of Board members' terms and expiration dates. Currently, Mr. Campbell (term expired 7/2013) and Mark Urbassik (term expired 7/2016) will remain active while awaiting reappointment, and there are currently two vacant positions on the Board. Additionally, J. Neil Ketchum has been appointed by Secretary McDonnell as an alternate for Mr. Robertson on the Board.

Land Recycling Program (LRP) Update

George Hartenstein announced that Mr. Conrad has been named Acting Director of the Bureau of Environmental Cleanup & Brownfields. Mr. Hartenstein reported on the financial status of the Bureau. The Hazardous Sites Cleanup Fund (HSCF), which funds the operating budget of the Bureau, is expected to provide sufficient funds to fully maintain operation of the Bureau until the fiscal year ending June 30, 2019. At that point, HSCF is expected to provide only 40-50 percent of the funds required to maintain Bureau functions at full capacity. Solutions to the upcoming financial situation remain under consideration by DEP executive staff and the legislature. Joel Bolstein offered to discuss the financial shortfall with PENNVEST to determine if financing opportunities exist. Colleen Costello suggested the Brownfields Reauthorization Act as a possible funding source.

Mr. Conrad reported that the final-omit rulemaking was published on March 17, 2018, in the *Pennsylvania Bulletin*. This rulemaking was solely to correct specific errors in the MSCs and toxicity values. The errors were due to a transcription error for the groundwater medium-specific concentration (MSC) for Aldrin and transcription errors for the toxicity values used to calculate soil MSCs for beryllium and cadmium.

The Chapter 250 regulations contain a requirement to review and propose necessary revisions to the MSCs every 36 months. Therefore, in support of the next rulemaking cycle, the Bureau expects to share concepts for the upcoming rulemaking (36-month period expires September 2019) with the CSSAB during the next Board meeting on August 1, 2018.

Mr. Conrad provided an update on the Department's activity regarding emerging contaminants Perfluorooctanesulfonic acid (PFOS) and Perfluorooctanoic acid (PFOA). EPA issued drinking water Health Advisory Levels (HAL) in 2016 for the chemicals. By law, the HAL is adopted as the MSC for groundwater upon publication in EPA's most recent edition of the Drinking Water Standards and Health Advisories. The PFOS/PFOA MSC will be added to the next Chapter 250 rulemaking. Mr. Bolstein expressed concern with the use of the HAL outside of its intended use as a drinking water advisory level. He is concerned that the HAL has limitations that may prevent it from being used as a cleanup value for groundwater or surface water. Mr. Bolstein also suggested the Department evaluate the equations in Chapter 250 to determine if they can be used to calculate MSCs for PFAS chemicals. Brie Sterling of DEP is closely monitoring the U.S. Environmental Protection Agency's (EPA's) research and is a member of ITRC's PFOS/PFOA

research team. All newsworthy items regarding this issue will be posted on DEP's webpage devoted to this issue. Mr. Campbell states that this set of chemicals may be extremely challenging for remediators who are attempting to attain the Background cleanup standard. He also requested that the Board have ample time ahead of the next scheduled meeting if any input is required regarding the development of toxicity values for these chemicals. Audience member John Clarke requested that the cost of analytical testing be considered when the relevant parties develop methodologies.

Mr. Conrad reported that the public comment period for the draft publication of the LRP Technical Guidance Manual (TGM) ended on March 16, 2018. A total of nine commentators submitted nearly 100 total comments to the Bureau. LRP staff are presently consolidating comments and preparing a comment-response document. An overview of the comments will be discussed at the next Board meeting with the goal of finalizing the TGM in the 4th quarter of 2018. The Board suggested an ongoing review of portions of the TGM for future meetings rather than being asked to review the entire revised document all at one time.

Management of Fill Policy Presentation

Ali Tarquino Morris, Municipal and Residual Waste Program Manager from the Bureau of Waste Management, provided a PowerPoint presentation regarding proposed revisions to DEP's Management of Fill Policy (MoFP). Don Wagner indicated that some native materials in Pennsylvania may contain regulated substances at concentrations higher than what is designated as clean fill. He requested that the revised MoFP emphasize that a spill or release must occur for fill material to be considered regulated fill. Mr. Wagner also noted the term "background" is defined differently by the Bureau of Waste Management than the LRP. Ms. Tarquino Morris stated that the issue of naturally occurring substances with concentrations above clean fill thresholds is currently addressed on the MoFP FAQ webpage. It was suggested that a "Decision Tree" be included in the revised MoFP for those not familiar with the process. Mr. Meloy stated that it is important to differentiate the terms "background" versus "point source," especially at urban sites. Mr. Bolstein queried whether DEP performs investigation/enforcement regarding fill sources originating from other states. Ms. Tarquino Morris responded that regional Waste Management staff review information provided by out-of-state sources and follow up as needed. Mr. Bolstein asked the Department to ensure major changes to the clean fill values are highlighted in the revised policy. Mr. Robertson suggested removing the word "uncontaminated" from the policy, as the definition of that term may differ between DEP programs. Mr. Meloy suggested that remediators be able to use due diligence information to demonstrate inorganics concentrations are at background levels without the need to collect additional samples. Mark Smith suggested short lists be developed for sampling at specific sites such as gas stations, oil and gas sites, etc. Mr. Campbell inquired about timing aspects regarding sampling plans when moving fill from one site to another. Mr. Hartenstein reported that if soil is from an unknown source, a sampling plan may be warranted. DEP would have 10 days to review the submitted sampling plan, or the plan would be deemed approved.

Chapter 250 Technical Questions

DEP posed the following technical issues to the Board:

1. The recommended groundwater ingestion rate as issued by EPA's Office of Solid Waste and Emergency Response has increased from 2.0 to 2.5 L/day. By implementing this revision, PA's groundwater MSC values would become lower. Annette Guiseppi-Elie recommended usage of the Exposure Factors Handbook for further assistance on this matter. The Board will form a workgroup to evaluate other exposure factors to determine if any additional updates to the Chapter 250 MSC equations are needed.
2. EPA allows for rounding risk characterization results to one significant figure. The Land Recycling and Environmental Remediation Standards Act (Act 2) uses a hazard index of 1.0 which is at odds with EPA's risk assessment guidance. After some discussion, the Board advised the Department that rounding to one significant figure seemed reasonable.
3. § 250.305(g) states that a remediator conducting a remediation of soils contaminated with a substance having a secondary Maximum Contaminant Level (MCL) will not be required to comply with the soil-to-groundwater pathway requirements for those substances to protect groundwater in aquifers for drinking water. However, as an example, the substance fluoride has both a primary and secondary MCL. The Board suggested using the primary MCL in this case. Or, if a Health Advisory Level (HAL) exists for a substance, the HAL should be utilized to calculate an MSC.
4. EPA and Centers for Disease Control and Prevention (CDC) have determined that childhood blood lead concentrations at or above 10 micrograms of lead per deciliter ($\mu\text{g/dL}$) present risks to children's health. However, CDC has a blood lead action level of 5 $\mu\text{g/dL}$. Additionally, the input parameters used in calculating the residential ingestion numeric value for lead in soil are based on EPA's Integrated Exposure Uptake Biokinetic (IEUBK) model from 1990. Guidance was requested regarding which level should be used and whether DEP should update the model used for the input parameters. Ms. Guiseppi-Elie stated that blood lead action levels are a top priority for EPA and it is possible that the action level could go as low as 3 $\mu\text{g/dL}$. She recommended the Department monitor the development of this issue, and she offered to research this issue further and report back to DEP. Ms. Guiseppi-Elie also recommended the Department update the input values on Table 7 in Chapter 250 and the model references.
5. The current definition of a volatile compound in § 250.1 is based solely on boiling point which results in the exclusion of naphthalene as well as several other semi-volatiles. It also is incongruent with the volatile description provided in the current DEP Vapor Intrusion Guidance (see Appendix A, Section 1, page 74). After some discussion, the Board recommended the Department revise the definition of a volatile in the Chapter 250 regulations so that it is consistent with the definition in the DEP Vapor Intrusion Guidance and the most widely accepted science for what is a volatile compound.
6. The recommendation was made by the Board to add the EPA Office of Pesticide Program's toxicity value database to the toxicity value source hierarchy in § 250.605.

Other Business

- Ms. Guiseppi-Elie agreed to further investigate toxicity values/updates for vanadium and report back at a future Board meeting. Provisionally peer-reviewed toxicity values (PPRTV) for vanadium (pentoxide) have a low level of confidence.
- Mr. Campbell requested that DEP examine the use of statistical analysis at sites being remediated to the Background standard. Mr. Campbell related that DEP staff may be too dependent on requiring statistical analysis of sampling data when it is not warranted. Mr. Conrad encouraged any Board member who may have similar experiences in the future to contact Central Office for additional assistance.
- Mr. Conrad and Mr. Maddigan agreed to provide clarification on the terms 'subcommittee' vs. 'workgroup' and their respective public notification requirements at the next Board meeting.
- Mr. Meloy reported that a meeting in which he participated between DEP's Oil & Gas Program and the Land Recycling Program was a good step forward towards the goal of site cleanup policy integration.

Meeting Adjourned at 2:10 p.m.